

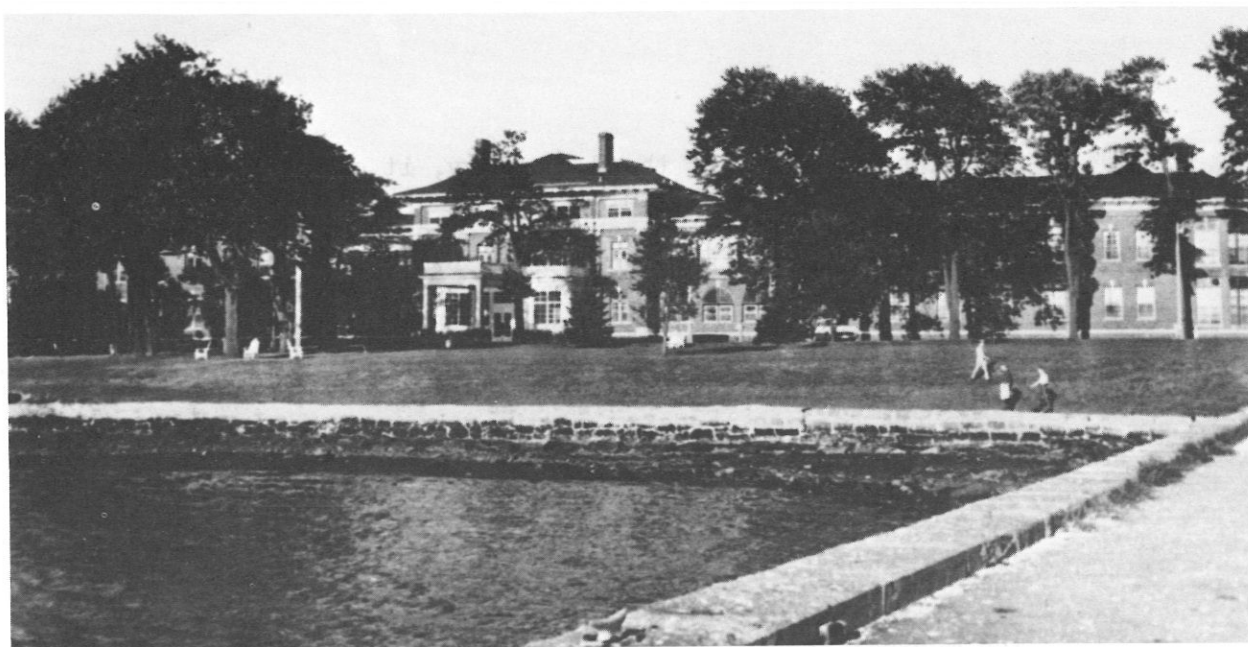


UNITED STATES NAVY *Medical News Letter*

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AN OPEN LETTER FROM REAR ADMIRAL R. B. BROWN,
SURGEON GENERAL OF THE U.S. NAVY TO ALL
HOSPITAL CORPSMEN UPON THE OCCASION OF THE 67th
ANNIVERSARY OF THE FOUNDING OF THE HOSPITAL CORPS

As Surgeon General of the U. S. Navy, it gives me great pleasure on this 67th anniversary of the U. S. Navy Hospital Corps, to extend my heartiest congratulations to every hospital corpsman throughout the world.

Today, as in the past, you continue to provide the always dedicated service to the sick and injured that has become the "Hallmark" of the Hospital Corps. On ships at sea, under the sea, in the air, and in foreign lands the world over you have repeatedly accepted challenges vital to accomplishing the mission of the Medical Department with admirable loyalty and devotion.

That the Hospital Corps has and continues to rise to the increasing demands and skills required in our ever expanding medical technology is personally gratifying and a source of inspiration to all. What new challenges the future holds cannot be predicted; however, I am certain they will be met and accomplished with the same enthusiasm and esprit de corps that has become the measure of standard in past performance.

For myself, and on behalf of the Medical Department of the Navy - "Well Done" and a Happy Birthday!


R. B. BROWN

United States Navy
MEDICAL NEWS LETTER

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No. 11

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Policy

The U.S. Navy Medical News Letter is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry, and allied sciences. The amount of information used is only that necessary to inform adequately officers of the Medical Department of the existence and source of such information. The items used are neither intended to be, nor are they, sus-

ceptible to use by any officer as a substitute for any item or article in its original form. All readers of the News Letter are urged to obtain the original of those items of particular interest to the individual.

Change of Address

Please forward changes of address for the News Letter to: Commanding Officer, U.S. Naval Medical School, National Naval Medical Center, Bethesda, Maryland 20014, giving full name, rank, corps, and old and new addresses.

FRONT COVER: View taken from the Hospital Pier of the U. S. Naval Hospital, Newport, R. I. Built in 1896, this hospital 60 ft. long and 33 ft. wide served until 1913 when it was vacated. In 1917 it was reopened to serve as a training school for Pharmacists Mates until closing again in 1923.

The first section of the present hospital was erected on part of 15.33 acres of farm land purchased from the Misses Smith, Hunter and Swindburne.

This hospital was officially opened on 15 April 1913 with a staff of four medical officers, one dental officer, eleven nurses, one pharmacist, twenty-six pharmacists mates and thirty-two civilian employees. The first patient census was sixty.

Nine additional wards were built during World War I and bed capacity increased by 390. There were 423 patients in the hospital at the end of 1917. Also in 1917 a diphtheria epidemic erupted which was beyond the capabilities of the small Newport civilian hospital. The Naval Hospital allotted three temporary wards and provided the staff and drugs to care for the sick.

This hospital also served in the most exemplary manner in the influenza epidemic of 1918; when 1,000 patients were under treatment; in 1925 when the excursion steamer Mackinac exploded, 130 injured were cared for here; in 1954 when the aircraft carrier Bennington suffered an explosion, ninety men were killed and eighty-two casualties were brought to the hospital many in serious and critical condition; and again in 1958 when the tanker Gulf Oil collided with the cargo ship Grahamn between Newport and Jamestown. Injured seamen from both ships were cared for by the hospital staff.

The years 1913-1963 saw the hospital grow from a main building and bed capacity of 150 to a World War II peak of 42 buildings and 1,492 patients reached on 26 February 1945.—Editor

The issuance of this publication approved by the Secretary of the Navy on 4 May 1964.

U.S. NAVY MEDICAL NEWS LETTER

FEATURE ARTICLE

"WHAT'S NEW IN THE MANAGEMENT OF TRAUMA"

MANAGEMENT OF GRAM-NEGATIVE SEPTIC SHOCK

*J. C. Rosenberg, M. D. Ph.D., Department of Surgery, U. of Ky. Medical Center,
Lexington, Kentucky*

There has been a relative increase in the frequency of infection resulting from nonsporulating microorganisms of fecal origin (*Pseudomonas*, *Proteus*, etc.). Forty percent of deaths secondary to bacteremic infections are now caused by gram-negative organisms. Prior to the antibiotic era, this figure was 9%. (1)

It is thought that the shock-producing agent in gram-negative infections is a polysaccharide-protein-lipid complex, known as, "endotoxin", which is a component of the cell wall of the micro-organism. With autolysis of the bacteria, this toxic substance is liberated and sets off a chain reaction terminating in shock. (2) Extensive laboratory studies of lethal endotoxemia have been carried out and are helpful in formulating a rational therapeutic approach to gram negative septicemic shock.

Blood Volume Replacement

Hypovolemia may be present secondary to blood loss, sequestration of fluid in the infected, traumatized area or due to increased losses resulting from fever. Three guides can be used for blood volume replacement; the hematocrit, the central venous pressure and blood volume determinations. The first two can readily be followed with a minimal amount of equipment and effort. Plasma and saline or Hartmann's solution should be given if the hematocrit is high (over 40%) and the central venous pressure low (under 10 cm of water). Otherwise whole blood should be used. Blood volume expanders may be substituted for plasma. Low-Molecular weight dextran (no more than 1000 cc) may be beneficial in decreasing "sludging". Mannitol may be used to induce a solute diuresis.

Steroids

The use of pharmacologic doses of corticosteroids (2 to 3 Gm of hydrocortisone daily) during the first 2 to 3 days following the appearance of shock has

been demonstrated to be of great benefit clinically and experimentally. There is no need to taper the dose or utilize maintenance doses of steroids if the patient survives. Recent experimental work has indicated that the adrenal steroid, aldosterone, may bind endotoxin and thus ameliorate the effects of gram-negative septic shock.

Acidosis

A constant concomitant of shock is metabolic acidosis secondary to poor tissue perfusion and hypoxia. The use of bicarbonate, and occasionally THAM, is often required and is discussed elsewhere in this series of articles. Tracheostomy and automatic ventilation may be required if there is evidence of respiratory acidosis. The arterial pH, PO₂ and PCO₂ are the best guides to therapy in this area.

Antibiotics and Control of Infection

Drainage of abscesses, debridement of necrotic tissue, exteriorization of intestinal fistulae, etc., should be carried out as soon as feasible. Material for identification of the offending organism and its antibiotic sensitivity can be obtained at this time or by blood cultures. Antibiotics consisting of massive doses of penicillin (40 million units intravenously daily) and a broad spectrum antibiotic such as chloromycetin (2-4 gm daily) should be started immediately; before material for culture is obtained.

Vasopressors-Vasodilators

Vasoconstrictor drugs should only be used as a resuscitative measure when the blood pressure is unobtainable and cardiac activity is not evident. Its prolonged use may be deleterious, especially with regard to renal function. Occasionally, when the blood volume is maximally expanded and all else fails, small amounts of vasopressor may improve

peripheral blood flow, as evidenced by an increase in urine output.

A large body of information has recently been accumulated to indicate that vasodilators, such as dibenzylamine, may be beneficial. Adrenergic blockade with dibenzylamine is available to only a few investigators. It holds promise as a therapeutic tool either alone or when combined with different types of vasoconstricting agents. Its clinical use is still quite properly on an investigational basis only.

Miscellaneous Considerations

If a high fever is present, hypothermia may control the resulting increased metabolic rate. Oxygen therapy, including use of hyperbaric chambers, has not proven helpful. Although there is some protective effect with heparin pre-treatment in experimental endotoxin shock, clotting defects are common later in the course of the disease and have no role in the clinical management of gram-negative shock. Assisted circulation (cardio-pulmonary bypass) has been investigated but has also not proven to be worthwhile. Splenic extracts which detoxify endotoxin have recently been developed and may prove

to be a specific means of treating this form of shock. (3)

At the moment the proven keystones in the treatment of endotoxic or shock of bacterial origin are:

1. Control of infection—including surgical means.
2. Specific antibiotic therapy.
3. Blood volume replacement.
4. Correction of acidosis.

Of less definite but suggestive value are:

1. Large doses of steroids.
2. Vasodilators with or without vasopressors.

Of purely theoretic interest and of *unproven* clinical value.

1. Hypothermic.
2. Hyperbaric oxygen.
3. Assisted circulation.
4. Splenic extracts.

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MEDICAL ARTICLE

AN UNUSUAL INJURY DUE TO THE SEAT BELT

Capt. Stephen H. Tolins, MC, USN

Throughout the nation people are being urged to form the seat belt habit.^{1,3,5,6} As early as 1953 the California Highway Patrol was using seat belts and, in 1957, the California Vehicle Code provided for the investigation of all motor vehicle accidents involving personal injury as to the effect, if any, safety belts would have had on the accident. Seat belts have been the subject of U. S. Public Health Service leaflets and Congressional hearings. The Automotive Crash Injury Research of Cornell University has for years done extensive research on this problem and published numerous excellent comprehensive reports.^{3,5,6}

The following case is presented to delineate what might be termed a definitive syndrome and not in any way to detract from the proven efficiency and life-saving capabilities of seat belts.

From the Surgery Branch, Bureau of Medicine and Surgery, Department of the Navy, Washington 25, D. C. The opinions contained herein are those of the author and are not to be construed as official or reflecting the view of the Navy Department.

Case Report

L. W. F., Hospital #146351, was admitted to the U. S. Naval Hospital, Jacksonville, Florida 28 hours after having been in an automobile accident, complaining of cramping abdominal pains.

The patient had been riding in the seat beside the driver of a 1957 Ford station wagon wearing a deck-bolted type seat belt. The driver and the three passengers in the back had not put on their seat belts. While traveling at a speed of 65 miles per hour the car missed a turn and went down a hill to the right striking a telephone pole with the left front area of the car. On impact, the driver was leaning on and holding on to the patient in the seat beside him and all three passengers in the back were thrown forward pushing the front seat forward as they did so. The patient's seat belt held however, and he states that he felt as if it were "cutting me in two." The patient suffered two small lacerations of the forehead

and a bruise across the central portion of the abdomen. He was helped from the car by the other passengers, none of whom were in any way injured, and sat on the ground until taken by ambulance to a nearby dispensary. There, x-rays of the chest and abdomen were taken which were reported as being negative. The patient was observed there throughout the following day and, as his cramps became more severe, he was transferred to this hospital.

During the hours prior to admission, the patient had vomited once, the vomitus did not contain blood, and there had been no bowel movements.

The past history revealed only a shell fragment wound of the left foot during World War II. The systemic review was entirely unrevealing.

Physical examination on admission revealed the temperature 99.2, pulse 88, and blood pressure 130/84. The patient was a medium build, being 5'7" and weighing 152 pounds. He was alert and well oriented and appeared in acute distress with lower abdominal pain. There were sutured lacerations of the forehead and scalp and a large area of ecchymosis over the right iliac crest. The abdomen was protuberant with hypoactive bowel sounds and generalized tenderness without spasm. The urinalysis revealed a trace of albumin, 2-4 RBC, and 20-25 WBC per high powered field. The blood count on admission revealed 11,700 white blood cells with 89 per cent neutrophils, the hematocrit 49, and hemoglobin 16.4. The amylase was 62. Chest x-ray revealed minimal elevation of the left diaphragm with some haziness in the region of the costophrenic angle. The lung fields were otherwise clear. Lateral and upright films of the abdomen revealed considerable gaseous distension of the small bowel, psoas markings were sharp bilaterally and there were small amounts of gas and feces scattered about the colon. In the lateral decubitus with the left side down there was some fluid layering out in the left hemithorax.

On the day of admission a left thoracentesis was performed removing a small amount of slightly cloudy fluid. With the developing ileus, the patient was treated with nasogastric suction and intravenous fluids and electrolytes while being closely observed for the possibility of a ruptured viscus. On the second post-injury day his vital signs remained approximately the same and study of the blood electrolytes revealed sodium 130, potassium 4.7, chloride 90, CO₂ 22, and calcium 10.4. Amylase study done on the fluid taken from the left chest revealed a value of 420 units. Repeat chest x-ray revealed blunting of the right costophrenic angle with slight clearing of

the left. Films of the abdomen still revealed dilated loops of small bowel.

It was felt that the patient had a traumatic pancreatitis and treatment of nasogastric suction and parenteral feedings was continued. On the third post-trauma day his general condition was unchanged while the patient insisted that he felt better. On the morning of the fourth post-trauma day the abdomen appeared more distended and tense and no bowel sounds could be heard. X-ray examination of the abdomen again revealed dilated loops of small bowel with some gas and fecal material in the large bowel. It was felt at this time that the possibility of a ruptured duodenum or upper jejunum or extrahepatic biliary duct was a very real one and that exploration was indicated.

Under endotracheal anesthesia, through a right upper paramedian incision, exploration was performed. There was a generalized peritonitis present with fibrinous adhesions scattered throughout and a blowout-type perforation approximately 2 cm. in diameter on the mesenteric border of the small bowel in the upper jejunal region. This was debrided and closed in two layers. The duodenal loop was Kocherized and this area and the entire abdomen was carefully inspected with no other abnormalities being noted. The abdomen was thoroughly irrigated and closed in layers using catgut for peritoneum and stainless steel wire for the fascia and skin. The patient withstood the procedure well and required a unit of whole blood as transfusion during the procedure. His postoperative course was complicated by wound infection which yielded *E. coli* and coagulase positive staphylococci sensitive to all antibiotics except penicillin. With proper drainage and antibiotics this infection cleared and secondary closure was then possible after excision of a sinus tract. On the 62nd hospital day the patient was discharged fit for duty.

Discussion

This type of injury fortunately is rare; however, it does occur. In his discussion of 2,778 accidents involving 944 injuries, Garrett³ notes one case of ruptured pancreas and duodenum. The treating physician had noted "the seat belt caused injury, but saved the patient's life." Kulowski and Rost⁴ described a case of intermittent partial obstruction of the ileum due to adhesions at the site of previous mesentery tear caused presumably by a seat belt in an auto accident. A questionnaire sent to 19 naval hospitals within the United States revealed the occurrence of one case of sigmoid colon rupture due to "seat belt injury."

The recognition of the particular clinical picture produced by this type of nonpenetrating blunt abdominal trauma has been well documented previously.⁷ The transient period of shock-like state, which is mild in character, followed by gradual appearance over several days of symptoms of abdominal pain and signs of abdominal rigidity, usually ascribed to reflex adynamic ileus or traumatic pancreatitis, followed gradually by ascites, jaundice and wasting, should all be familiar to surgeons in this day of speed and trauma.

So effective has been the campaign for seat belts that three states have already passed laws requiring that front seat belts be installed in all new cars. With the increased use of seat belts, this type of case might be expected to be seen more frequently. Its early recognition, therefore, becomes more important. The possible increase in this type of case also becomes a cogent argument in favor of the combined

lap-shoulder belt, which has recently been stressed by Campbell.²

Summary

1. A case of so-called "seat belt syndrome" has been described.

2. The use of the combined lap-shoulder belt rather than the seat belt is urged.

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FROM THE NOTE BOOK

INDIANAPOLIS TO HOST JOINT OCCUPATIONAL HEALTH CONGRESS AND STATE MEDICAL MEETING

Chicago—The 1965 Congress on Occupational Health, sponsored annually by the American Medical Association's Council on Occupational Health, will be held concurrently with the annual convention of the Indiana State Medical Association.

The two and one-half day meeting will be held at the Murat Temple in Indianapolis, Tuesday through Thursday, Oct. 12-14.

Tuesday afternoon's session will feature a Clinical-Pathological Conference moderated by Jan T. Tillsch, MD, member of the Mayo Clinic, Rochester, Minn. Participants will be R. Lomax Wells, MD, general medical director of the Chesapeake and Potomac Telephone Companies, Washington, D. C.; Lemuel C. McGee, MD, medical director, Hercules Powder Company, Wilmington, Del.; Emmett B. Lamb, MD, medical director, International Harvester Company, Indianapolis.

An earlier session on Tuesday will feature A. H. Hirschfeld, MD, assistant professor of medicine, Wayne University College of Medicine, Detroit, who

will speak on the subject of disability without disease or accident.

Wednesday sessions have been designed especially to interest general practitioners. The opening session on the "Role of the Family Physician in Workmen's Compensation" will be moderated by George F. Wilkins, MD, medical director, New England Telephone and Telegraph Company, Boston. Participating in this symposium will be physicians and attorneys experienced in both the legal and medical aspects of workmen's compensation cases.

An afternoon symposium entitled "Role of the Family Physician in Employee Health Problems" will feature discussions of immunization, emphysema, and cardiac problems. Physicians taking part will be Richard A. Sutter, Sutter Clinic, St. Louis; O. A. Sander, consultant in occupational medicine, Milwaukee; Leon Warshaw, medical director, Paramount Pictures Corp., New York; and Gradie R. Rowntree, medical director, Fawcett-Dearing Printing Company, Louisville.

Another Wednesday session will feature a talk by Leonard E. Himler, MD, Mercywood Hospital, Ann Arbor, Mich. on recognition of the emotionally disturbed employee.

The joint luncheon on Wednesday will feature a presentation of the Physician's Award of the President's Committee on Employment of the Handicapped. An address will be given by Henry Viscardi, Jr., president, Abilities, Inc., Albertson, N. Y.

A medical-socio-economic conference on Thursday, moderated by Lemuel C. McGee, MD, will feature Joseph Miller, commissioner, Indiana Industrial Board, Indianapolis; E. H. Bellows, vice president, Olin Mathieson Chemical Corporation, New York; and Robert Parker, assistant to the president, American Brake Shoe Company, New York.

Other sessions on Thursday will be devoted to discussions of the physician's role in automobile safety, preventable occupational dermatoses, personal protective equipment for employees, and industrial clinics.

A special feature of the meeting will be a 25th anniversary Congress on Occupational Health reception and dinner on Thursday evening in honor of former members of the Council on Occupational Health. James H. Sterner, MD, corporate medical director, Eastman Kodak Company, Rochester, N. Y., will be master of ceremonies.

For additional information write: Department of Occupational Health, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610, or to the Indiana State Medical Association, 3935 North Meridian Street, Indianapolis, Indiana 46208.

NOTICE

Senior medical students throughout the country will soon receive the 1965 edition of Berry Plan information bulletin. Its issuance by Dept. of Defense marks the 11th anniversary of this system of draft-deferment for residency training in exchange for subsequent military duty in Army, Navy or Air Force. Latest edition for the first time, has a section on benefits of Medical Corps careers.—Editor.

METRECAL—SERUM IODINE

Ingestion of Metrecal may cause an increase in laboratory values for protein-bound iodine (PBI) and butanol-extractable iodine. When ordering such tests the physician should inquire if the patient is utilizing commercial dietaries and to so note on his request to the laboratory. If the patient is using such a preparation, sufficient time should elapse (approximately 30 days) after cessation of the dietary for readjustment and a confirmatory test ordered. The source of iodine is probably iodocasein. The Metrecal-induced increase in PBI values is apparently not due to alteration in thyroid function.—

Steinberg & Leifheit (Galveston, Texas), Texas Repts. Biol. & Med. 23: 122 (No. 1), 1965. (From: Clin-Alert, May 5, 1965, No. 127.)

INFLUENZA VACCINE

A slight change in the composition of influenza vaccine for the 1965-1966 season was announced by Dr. Luther L. Terry, Surgeon General of the Public Health Service, U. S. Department of Health, Education, and Welfare.

In addition to the representatives of the four influenza virus strains—A, A₁, A₂, and B—which are used in the current vaccine, next season's formula will include another A₂ strain, isolated in Taiwan in 1964. This strain is closely related to the A₂ strain which has been associated with epidemic influenza during the past season.

The licensed influenza vaccine manufacturers have been advised by the Service's Division of Biologics Standards of the addition of the Taiwan A₂ strain for the 1965-66 season.

Three A₂ influenza strains which were responsible for influenza epidemics in various parts of the world during 1964 have been under intensive study as possible candidates for inclusion in the current vaccine. Identified as A₂/Taiwan/1/64, A₂/Puerto Rico/1/64, and A₂/Sydney/2/64, they were evaluated for their antigenic properties as well as for suitability for commercial production.

Both clinical and laboratory information indicated that of the three candidate strains, the Taiwan/1/64 had the most desirable properties. It showed broader coverage than the other two, it had greater antigenicity in animal and clinical tests, and was considered suitable for production.

The laboratory and clinical work was carried out by Drs. J. Anthony Morris and Vernon Knight, National Institutes of Health; Dr. Fred Davenport, University of Michigan; Dr. Edward Buescher, Walter Reed Army Institute of Research; and Dr. Joseph Quilligan, of Loma Linda University, Los Angeles. After careful consideration of the data, the Division of Biologics Standards advised the manufacturers to proceed with the manufacture of a vaccine in which the A₂ influenza virus strain representation is equally divided between Japan/170/62, the current A₂ representative in the vaccine, and Taiwan/1/64.

Accordingly the present recommendation for the strain composition of the vaccine for the 1965-66 season is as follows:

A	PR8	100 CCA
A ₁	Ann Arbor/1/57	100 CCA

A ₂	Japan/170/62	100	CCA
A ₂	Taiwan/1/64	100	CCA
B	Maryland/1/59	200	CCA

"It is clear that we continue to be in a period of antigenic change," Dr. Terry said, "and that examination and analysis of the strains isolated in this country and abroad during the current season, or later in the present year, may call for further recommendations."—USDHEW, Public Health Service, Washington, D. C.

AN INCREASE IN THE EMPLOYMENT OF NURSES

A total of 35,209 nurses were employed full-time by national, State, and local public health agencies—both official and nonofficial—and by local boards of education in January 1964, according to a report just issued by the Public Health Service, U. S. Department of Health, Education, and Welfare.

The 1964 total represents an increase of 10,000 over 1950, the Public Health Service said. Most of the gain occurred in the number of nurses employed by local school boards, which increased their nursing staffs from 6,000 to over 13,000 during this period.

The number of public health nurses who care for people in their own homes increased by only 1,700—from 15,900 to 17,600.

Forty percent of the full-time nurses in public health had college degrees in January 1964, and 30 percent had both a college degree and public health preparation approved by the National League for Nursing.

The new data are contained in the 59-page report "Nurses in Public Health, January 1964," the 22nd public health nursing census issued by the Public Health Service. The report presents detailed information by State, type of agency, and type of position, on the number and educational preparation of nurses employed for public health work in the United States, Puerto Rico, the Virgin Islands, and Guam. Because of the increasing interest in home-care programs, the report for the first time includes data on nurses who are employed in hospital-based programs for follow-up care of patients at home.

"Nurses in Public Health, January 1964," Public Health Service Publication No. 785 Revised, may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, at 40 cents a copy. Further information on the latest census of nurses in public health may be obtained from the Division of Nursing, Public Health Service, U. S. Department of Health, Education, and Welfare, Washington, D. C. 20201.

CORRESPONDENCE COURSES

"The Medical Department correspondence courses TROPICAL MEDICINE IN THE FIELD, NavPers 10995-A; BACTERIOLOGY AND MYCOLOGY, NavPers 10504; BIOCHEMISTRY, NavPers 10503; and SEROLOGY, NavPers 10502 are now ready for distribution to eligible regular and reserve officer and enlisted personnel of the Armed Forces. Applications for these courses should be submitted on form NavPers 992, with appropriate change in the "To" line, and forwarded via official channels to the Commanding Officer, U.S. Naval Medical School, National Naval Medical Center, Bethesda, Maryland 20014. A description of these courses is delineated below:

TROPICAL MEDICINE IN THE FIELD, NAVPERS 10995-A. 12 ASSIGNMENTS—36 POINTS. Provides a concise guide in tropical medicine for the physician who may be called upon to practice in the tropics, and for the physician in temperate zones who may encounter tropical diseases of servicemen and others returning to the United States after duty in the tropics. Text: A Manual of Tropical Medicine, by Hunter, Frye, and Swartzwelder, 3rd. Edition, 1961.

BACTERIOLOGY AND MYCOLOGY, NAVPERS 10504. 3 ASSIGNMENTS—6 POINTS. This is one of six courses in the Clinical Laboratory Procedures series, and deals with the collection of bacteriological specimens; identification, classification, and characteristics of bacteria and fungi. Water and milk bacteriology, laboratory organization, serological testing and antibiotic sensitivity testing are also thoroughly covered. Text: Bacteriology and Mycology, U.S. Naval Medical School, NavPers 10865-BIV.

BIOCHEMISTRY, NAVPERS 10503. 3 ASSIGNMENTS—6 POINTS. This is one of six courses in the Clinical Laboratory Procedures series and presents laboratory organization, colorimetric and photometric techniques, gasometric analysis, collection and preservation of specimens, and over 75 biochemical procedures are covered. In addition, there are 20 illustrations of laboratory instruments and an extensive bibliography. Text: Biochemistry, U.S. Naval Medical School, NavPers 10865-AIII.

SEROLOGY, NAVPERS 10502. 3 ASSIGNMENTS—5 POINTS. This is one of the six courses in the Clinical Laboratory Procedures series, and deals with technique of venipuncture, shipment of specimens, handling of glassware, and general technique as well as specific instructions for VDRL, Kol-

mer Complement, Mazzini Microflocculation, Treponema Pallidum immobilization, and other tests. Text: Serology, U.S. Naval Medical School.

"Individuals who have previously completed the course in Clinical Laboratory Procedures, NavPers 10994, and Tropical Medicine in the Field, NavPers 10995 will receive additional credit for completing these courses."—Commanding Officer, U.S. Naval Medical School, NNMCMC, Bethesda, Maryland.

ANGIOGRAPHY COTTON FIBER EMBOLIZATION

Injection of particulate foreign material into blood vessels during angiography obviously should be judiciously avoided. A source of such material (cotton fiber) was found to be the sterile saline solution drawn from open containers to irrigate catheters. Four cases of embolization resulting from injection of contaminated solutions were observed. One occurred after percutaneous carotid arteriography, and three following selective renal arteriography. In the

latter, gross infarctions were found in the kidneys. Solutions used for irrigation should be kept in closed bottles and not in open containers where they may be easily contaminated with cotton fibers or other foreign material, such as glove powder.—Adams et al. (Palo Alto, Calif.), Radiol. 84: 678 (Apr.), 1965. (From: Clin-Alert, May 5, 1965, No. 130.)

WELL DONE—C. G. FMFLANT

"During the early stages of the present crisis in the Dominican Republic, additional medical personnel were required on extremely short notice to augment units of Fleet Marine Force Atlantic committed to the operation. I want to express my sincere appreciation to both those who worked so diligently to fill our requirements and to those who dropped whatever they were doing to answer the call. Once again the Navy Medical Department has demonstrated its readiness to meet any contingency. WELL DONE."

In Memoriam

His many friends in the Navy and the medical profession were made richer by the life of CAPT Malcolm W. Arnold MC USN (Ret) who passed away 6 May 1965. Born in Batesville, Mississippi, he received his BA degree from Louisiana State University in 1926 and was graduated from the Johns Hopkins Medical School, Baltimore, Md. in 1931. He was commissioned a Lieutenant (jg) in the Medical Corps of the United States Navy on 22 June 1931 and remained on active duty for almost 34 years.

During his naval career he served at numerous stations including the U. S. Naval Hospital, Guam, M. I. and was Chief of the Urology Service at the Great Lakes and St. Albans Naval Hospitals. Being promoted to the rank of Captain in 1945, he later became Commanding Officer of the Naval Medical School at the National Naval Medical Center. In following years he was Director of the Professional

Division in the Bureau of Medicine and Surgery where he played an important part in expanding the Navy's program for residency training of medical officers. In his most recent assignment he served as Director of the Bureau's Publications Division and Editor of the United States Navy Medical Newsletter. Under his editorship the Newsletter maintained a well regarded reputation for making significant professional medical information available to a large circle of Regular and Reserve Medical Department officers. He was a member of the Association of Military Surgeons, the North Central Section of the American Urological Association, a Fellow of the American College of Surgeons, and was certified by the American Board of Urology.

A true gentleman with a kindly manner has been lost to the medical profession in which he was a respected colleague with the highest ideals of medicine.

DENTAL SECTION

CURRENT ORAL SURGICAL OPINION CONCERNING THE VALUE OF PRE-IRRADIATION EXODONTIA

*E. J. Degnan, Oral Surg, Oral Med. and Oral
Path. 18(3): 307-311 September 1964.*

The views concerning pre-irradiation exodontia expressed in most texts on oral surgery and radiology, and which are widely taught and essentially adopted, is that teeth should be judiciously extracted prior to deep x-ray therapy to the jaws; the reason being to reduce the incidence of osteoradionecrosis. However, this practice is not universally accepted among some leaders in the field of radiology. In fact, Wildermuth, Cantril and their associates believe there is a strong possibility that the incidence of osteoradionecrosis increases as a result of pre-irradiation dental surgery, and many strongly voice the belief that external radiation should be started the day the diagnosis of carcinoma is made.

In an attempt to clarify this situation, a letter was sent to 100 leading oral surgeons throughout the country requesting answers to these questions:

A. Do you believe that exodontia (full mouth, those in line of radiation therapy, or those teeth which are grossly carious) significantly reduces the incidence of osteoradionecrosis?

B. If answer to A is "yes", what is the minimum time allowed for the healing process prior to initiation of radiation therapy?

Results

Seventy of the 100 polled answered the questionnaire. Fifty-four felt that pre-irradiation exodontia does reduce the incidence of osteoradionecrosis; six said it did not; and ten had no opinion.

Concerning the extent of exodontia prior to irradiation:

1. Ten said all the teeth in the oral cavity should be extracted.
2. Thirty-five said, only those in line of radiation.
3. Eight said, only those with caries and periodontal disease.
4. Sixteen felt a combination of 1 and 2.

5. One said only those teeth interfering with the placement of an oral cone.

The answers to question B—(minimum time allowed for healing prior to radiation therapy)—ranged from no delay to seven days, ten days, six weeks, wound completely healed, to indefinite.

Thus it is obvious that there is a substantial lack of agreement concerning the extent of surgery deemed necessary as well as the length of time one should wait prior to initiating x-ray therapy.

At the present time there is general belief that prophylactic exodontia is of value in reducing the incidence of bone necrosis, but there is no thorough and well-substantiated evidence as yet to prove this point, at either the research or statistical level.

The authors conclude that there is great need for further work at the research level in the animal laboratory.

(Abstracted by: CAPT Seymour Hoffman, DC, USN, U. S. Naval Training Center, Great Lakes, Ill.)

A VEXATIOUS ERRATIC ORAL LESION: NECROTIZING ULCERATIVE GINGIVITIS

*B. H. Seidberg, D.D.S. D. Progress. 4(1): 37-42
October 1963.*

Having been referred to as "the ulcer of the proximal end of the alimentary tract", Vincent's infection is described as a disease that finds its mark in those patients suffering from fatigue, inadequate diets or emotional stress.

Diagnosis may be made clinically on the basis of an acute inflammatory reaction of the papillary and marginal gingiva, with a punched-out, eroded, crater-like destruction of the gingiva and underlying tissues. Ulceration starting at the tip of an interdental papilla, later involving the marginal gingiva, destroys the former and distorts the gingival architecture of the latter. An ulcerating grayish-white or greenish-white pseudomembrane sloughs away leaving exposed a sensitive, bleeding concave depression.

Other predisposing factors include poor oral hygiene coupled with other local contributing causes.

Therapy is based upon establishing a favorable balance between resistance and infection. Supportive

treatment in the nature of rest, good nutrition, and vitamin supplements, if needed, is a prime consideration. Treatment of local factors by establishing a sound oral hygiene regimen is of vital importance. Proper brushing, irrigations with hydrogen peroxide, use of gentian violet and antibiotics, if necessary, are included in the treatment. Once the disease is under control, periodontal treatment, including gingivoplasty and osteoplasty, should be considered. (LT B. H. Seidberg, DC, USNR, Boston Naval Shipyard, Boston, Massachusetts, presented the above paper before the Tufts University School of Dental Medicine on 5 November 1964, in Boston, Massachusetts.)

DENTAL SUPPORT TO THE FLEET MARINE FORCE

In 1913 the first naval dental officer was ordered to the Marine Corps. Since that time, members of the dental corps have provided treatment for the Marines during times of war and peace. Many of our officers and enlisted personnel have received decorations for action in combat and others have received appropriate recognition for their professional capabilities both in the field and in garrison. The Navy Dental Corps has established a fine record with the Marine Corps. This often demanded personal sacrifices.

During World War I, two dental officers were decorated with the Nation's highest award, the Medal of Honor. Lieutenant (junior grade) Weeden E. Osborne was the first Naval officer to meet death in the land fighting overseas. He was helping to carry the wounded to a place of safety when killed. Lieutenant (junior grade) Alexander G. Lyle won his Medal of Honor for extraordinary heroism and devotion to duty.

Few engagements took place in World War II without active participation of dental personnel serving with their units. Proportionately, each contributed his share in all the efforts of each campaign. Dental Officers and Dental Technicians carried out regularly assigned duties, assisted in the sick bays and operating rooms, administered supportive therapy, gave anesthetics, and aided in identifying the dead. Again, during the Korean Conflict our Corps was called upon to support the Marine Corps in their usual combat environment and did so with distinction.

Of note is the fact that, among numerous dental officers who have been honored for their service to the Marine Corps, the present Staff Dental Officer, Headquarters, Marine Corps, was awarded the Legion of Merit with Combat V for his professional,

military, and administrative contributions during the Korean conflict.

It was during the Korean Conflict that a new concept in dental support was applied after the Chosin Reservoir Operation. In this operation the Marine units were extended over a wide area. Providing adequate dental care to men in the forward units was found to be almost impossible, and little else besides emergency treatment was given. Consequently, a new concept was considered, in which most of the dental personnel were combined in a group and established in an area where their services could be utilized more effectively. The area chosen was in the rear echelon where troops were billeted when their units were placed in reserve. This arrangement proved to be more efficient than had been expected, and resulted in a recommendation to conduct studies for a reorganization of the dental services within the Fleet Marine Force. The period of study and evaluation looking toward improved dental support continued until late in 1955. Upon completion of the studies, dental companies were authorized by the Commandant of the Marine Corps.

Force dental companies were organized to provide dental support to Marine Divisions, Marine Aircraft Wings, or Force Troops. The companies were designed to attain maximum utilization of professional dental manpower while providing the most effective and timely dental support to combat or other Fleet Marine Force operations. Dental Companies normally do not take an active part in an initial landing or in the early phases of a Fleet Marine Force combat operation. However, detachments of the companies may be temporarily assigned to medical units that land early and assist medical personnel with casualty treatment, particularly those involving maxillofacial injuries. Maximum dental service is concentrated in appropriate areas after the initial phases of the assault, and as required. The organization and equipment of companies were designed to permit a considerable degree of flexibility and mobility thus permitting the companies to operate as a unit, or to subdivide into small units. Mobile dental detachments can be sent to separate or independent Marine organizations to provide dental support under all conditions.

A dental company consists of 25 officers, 42 dental technicians, and three enlisted Marines. The Commanding Officer of a dental company is charged with the responsibility for the operation, security and combat readiness of his command. This includes training in the use of field equipment and all other aspects

of training which prepares individuals, detachments and companies for combat duty.

Providing dental support to widely scattered Marine Corps units presents a real challenge to Naval Dental personnel. For instance, a detachment of dental officers and dental technicians is supporting Marine elements in South Vietnam and will soon be field testing new dental equipment. If the tests are successful, another step will be accomplished toward improved field equipment.

Dental officers and technicians who have not had duty in the field with the Fleet Marine Forces have missed a very rewarding and interesting experience while serving their country. Some dental officers and technicians have actually spent more time with

the Marine Corps than the Navy. They have learned to perform their duties quickly and efficiently in a field environment without the conveniences of garrison-type facilities. In addition to their professional responsibilities, they have become proficient in the art of self-survival, use of weapons and casualty care. Dental personnel who have served with the Fleet Marine Forces throughout the years have earned prestige, respect and are accepted as members of this great organization.

Dental officers and technicians who want to serve with the Fleet Marine Forces should request such duty when submitting their next duty preferences. (Dental Section, BUMED.)

PERSONNEL AND PROFESSIONAL NOTES

U. S. NAVY DENTAL OFFICER PRESENTATIONS

The following dental officers of the FIFTH Naval District presented clinics as indicated before the Spring Meeting of the Virginia-Tidewater Dental Association, April 9 and 10, 1965 in Norfolk, Virginia:

CDR A. D. Echols DC USN
U. S. Naval Dental Clinic, Norfolk, Va.

Are Your Partial Dentures Showing

CDR R. G. Granger DC USN
U. S. Naval Dental Clinic, Norfolk, Va.

The Use of Occlusal Patterns Cut From Anatomic Acrylic Denture Teeth to Develop the Occlusion in an Occluso Rehabilitation Case

CDR R. W. Slater DC USN and
LCDR R. K. Fenster DC USN
U. S. Naval Dental Clinic, Norfolk, Va.

Operative's Role in Preventive Dentistry

LCDR D. G. Garver DC USN
U. S. Naval Dental Clinic, Norfolk, Va.

Pins-Technique—Success in Large Restorations

LCDR C. E. Cunningham DC USN and
LCDR J. H. Burke DC USN
U. S. Naval Dental Clinic, Norfolk, Va.

Pneumatization Procedures in the Management of Large Periapical Lesions

LT C. B. Smith DC USNR and
LT W. M. Putman DC USNR
U. S. Naval Air Station, Oceana, Va.

Operative Dentistry Utilizing Markley Pins

CDR R. R. Thomason DC USN and
LT L. S. Vazzana DC USN
U. S. Naval Weapons Station, Yorktown, Va.

Repair of Fractured Anterior Teeth

The following dental officers of the U. S. Naval Dental Clinic, Long Beach, California, presented table clinics as indicated before the Harbor Dental Society Annual Scientific Meeting on 14 April 1965 in Long Beach, California:

LCDR A. D. Heyen DC USN

Repair of Fractured Anterior Corners Using Precision Stainless Steel Pins

LT R. A. Hesby DC USN

Acrylic Jacket Technique

The following dental officers and civilian personnel of the U. S. Naval Training Center, Great Lakes, Illinois, presented table clinics as indicated on 12 May 1965:

Wisconsin State Dental Society—Milwaukee, Wisconsin

CAPT T. J. Pape DC USN and
LCDR B. J. Devos DC USN

The Third Molar and Its Management

B. L. Lamberts, Ph.D and
T. S. Meyer, M. S.

Separation of Salivary Proteins

Illinois State Dental Society—Rockford, Illinois

LCDR H. J. Keene DC USN
LT T. F. Hafner DC USNR and
LT D. R. Sheppard DC USNR

Periodontal Disease in Caries Immune Naval Recruits
Amalgam Failures

LT A. L. Coykendall DC USN

A Test for the Effectiveness of Rinsing the Mouth After
Eating

I. L. Shklair, Ph.D

C-Reactive Protein and Periodontal Disease

CAPT W. Naish DC USN, Fourth Naval District Dental Officer and dental officers of the FOURTH Naval District hosted the 16th Annual Joint Scientific Meeting of the Philadelphia County Dental Society on 21 April 1965 in the U. S. Naval Hospital, Philadelphia, Pennsylvania. CAPT F. J. Kratochvil DC USN, U. S. Naval Dental School, Bethesda, Maryland, guest speaker, presented a clinic entitled Periodontal Considerations for Removable Denture Patients.

CAPT N. B. Shipley DC USN, Dental Officer, U. S. Naval Auxiliary Air Station, Meridian, Mississippi, hosted the Meridian Area Dental Society on 20 April 1965. CDR H. S. Samuels DC USN, Chief of Dental Service, U. S. Naval Hospital, Pensacola, Florida, presented an illustrated talk on Oral Pathology.

PREVENTIVE DENTISTRY FILM—
PREVENTION OF ORAL DISEASE
(MN-9868)

On 12 February 1965, the U. S. Naval Photographic Center made distribution of this film to all ships and stations having a dental facility. The dental officer of each facility should have received a copy of this film for permanent custody.

The dental officers who are not aware of the receipt of this film are requested to contact their command film library and/or their administrative officer in order to determine whether or not this film has been received. Those dental officers of ships and stations who have not received this film are requested to notify Chief, Bureau of Medicine and Surgery, (Code 611A) at the earliest possible date.

CITIZENS TO RECONSIDER
FLUORIDATION DECISION

Residents of Antigo, Wisconsin, are going to reconsider their decision of four years ago to end the

fluoridation of the city's water supply. A survey by the State Board of Health has shown that in the intervening four years, tooth decay among the city's elementary school children has increased as much as 180%.

The study showed that tooth decay had risen 92% among kindergarten pupils, 183% among second graders and 100% among fourth graders in 1964, compared with a similar survey in 1960.

After publication of the survey results, the city council decided to ask residents to vote on whether they now favor fluoridation. The vote is scheduled April 6.

Scores of professional persons and civic clubs have taken public stands urging a return to fluoridation.

Editor's Note:

The referendum on April 6 ratified a return to fluoridation—1824 to 1685. (The AMA News 8(13): 5 March 29 1965)

LIST OF NEWLY STANDARDIZED ITEMS AVAILABLE FOR ISSUE

FSN	NOMENCLATURE	UNIT	PRICE
6520-074-4947	Mouthpiece, Saliva Ejector, Dental	EA	2.60
6520-226-0253	Strip Assortment, Abrasive Dental, Flint, Coarse Grit, 100s	BX	.82
6520-226-0254	Strip Assortment, Abrasive Dental, Flint, Fine Grit, 100s	BX	.82
6520-226-0255	Strip Assortment, Abrasive Dental, Flint, Medium Grit, 100s	BX	.82
6520-890-1864	Gingival Retraction Cord, Impregnated, Dental, 4 Ply	PG	1.70
6520-890-1865	Gingival Retraction Cord, Impregnated, Dental, 2 Ply	PG	1.70
6520-890-1871	Dispenser, Dental Floss, Metal	EA	3.10
6520-965-0004	Wheel, Abrasive, Diamond, Friction Grip Angle Handpiece, Ball, High Speed, 0.065 inch Diameter	EA	.59
6520-965-0005	Wheel, Abrasive, Diamond, Friction Grip Angle Handpiece, Flame Shaped, High Speed, 0.045 inch Diameter	EA	.62
6520-965-0007	Wheel, Abrasive, Diamond, Friction Grip Angle Handpiece, Cylinder, High Speed, 0.050" by 0.165"	EA	.62
6520-965-0008	Wheel, Abrasive, Diamond, Friction Grip Angle Handpiece, Cylinder, High Speed, 0.055" by 0.245"	EA	.66
6520-965-0010	Wheel, Abrasive, Diamond, Friction Grip Angle Handpiece, Inverted Cone, High Speed, 0.060 inch Diameter	EA	.62

NAVAL OFFICER ELECTED PRESIDENT, AMERICAN ACADEMY OF ORAL PATHOLOGY

LAS VEGAS, NEVADA—Captain Henry H. Scofield, DC, USN, Chief of the Dental and Oral Pathology Division of the Armed Forces Institute of Pathology, Washington, D. C. was elected president of the American Academy of Oral Pathology at the Academy's 19th annual meeting here recently.

Captain Scofield succeeded Captain Louis S. Hansen, DC, USN, Head of the Officer Education and Training Department, U. S. Naval Dental School, National Naval Medical Center, Bethesda, Md.

Captain Hansen and Captain Scofield presided at the annual meeting's two scientific sessions. Dr. Robert J. Lukes, former chief of the Hematology Branch at the AFIP and now Professor of Pathology at the University of Southern California, moderated the Academy's annual symposium. The meeting was attended by about 200 dentists and physicians.

Other officers elected by the Academy included: President-elect, Dr. Robert J. Gorlin of the University of Minnesota; Vice President, Dr. Harold R.

Stanley of the National Institute of Dental Research; Secretary-Treasurer, Dr. S. Miles Standish of Indiana University; and Editor, Dr. Donald A. Kerr of the University of Michigan.

A graduate of Loyola (Chicago) and Georgetown Universities, Captain Scofield has been Chief of the Dental and Oral Division at the AFIP since 1963. He served previously as Head of the Oral Pathology Division at the Naval Dental School in Bethesda and has had overseas tours of duty in Peiping, China, Guam, Japan, Korea and Viet-Nam.

Captain and Mrs. Scofield and a daughter, Kathleen Ann, reside at 9850 Singleton Drive in Bethesda. Another daughter, Mary Jo, is a staff nurse at Bon Secour Hospital in Baltimore.

COURSES AVAILABLE TO ACTIVE DUTY RESERVE DENTAL OFFICERS

The following courses and convening dates will be available to Reserve Officers 2205, for active duty for training during fiscal year 1966 at the U. S. Naval Dental School, National Naval Medical Center, Bethesda, Maryland.

Periodontics	— 27 Sept-1 Oct 1965
Removable partial dentures	— 4 Oct-8 Oct 1965
Oral Pathology	— 18 Oct-22 Oct 1965
Endodontics	— 25 Oct-29 Oct 1965
Oral Surgery	— 10 Jan-14 Jan 1966
Oral Roentgenology	— 17 Jan-21 Jan 1966

Complete Dentures	— 31 Jan-4 Feb 1966
Occlusion	— 7 Feb-11 Feb 1966
Fixed Partial Dentures	— 18 Apr-22 Apr 1966
Operative Dentistry	— 25 Apr-29 Apr 1966
Preventive Dentistry	— 2 May-6 May 1966

NOTE: In the course that runs from 18 April-6 May 1966, the officer may have his choice of either Fixed Partial Dentures and Operative Dentistry, or Operative Dentistry and Preventive Dentistry.

Quota Control:	COMONE	—1	COMFOUR	—2	COMEIGHT	—1
	COMTHREE	—1	COMFIVE	—1	COMNINE	—3
			COMSIX	—1		

The above listed courses will also be available to officers of the U. S. Naval Dental Corps on duty assignments east of the Mississippi River. Further

information will be released through District Dental Officers at a later date.

OCCUPATIONAL MEDICINE

MEDICAL FACTORS RELATED TO DRIVING ABILITY

Taken from the Proceedings of the National Conference on Medical Aspects of Driver Safety and Driver Licensing, Nov 16-18, 1964, Palmer House, Chicago.

Objectives

The objectives of this workshop are to develop guides whose implementation will lead to a decrease in the number of deaths and injuries on our highways by identification and control of medical factors which may impair driving abilities.

Task

Unfortunately, accident-free driving alone is not an adequate measure of performance in the driving task. The driving task broadly requires adequate physical, mental and emotional capabilities to operate a conventional vehicle with safety on the highways of this nation in keeping with usual traffic flow.

License for this task should be established first as a basic, full purpose, or unrestricted license. Additional requirements and higher orders of skills are necessary for commercial drivers. Restrictions for private passenger vehicle operations should be established in accordance with medical abilities required for night driving or other circumstances which may include specified highway speeds, areas of driving, types of roads, or special appliances to meet needs of individuals with physical limitations.

Significance

Though many factors contribute to automobile injuries and deaths, it is recognized that medical limitations constitute a significant factor in driving ability and accident production. If alcohol is included as a medical problem, then this becomes the most significant factor in driver-produced casualties.

Definitiveness

In many medical areas, control studies with large groups of drivers are not available at this time. Necessarily, therefore, these appraisals are in considerable measure provisional guides to be refined with the amassing of further medical knowledge and statistical data.

Duration of Medical Limitations

1. Short-Term Limitations.

Acute illnesses and short-term administration of drugs may have profound, though transient, effect on driving ability. These problems should be met through broadened physician awareness, the dissemination of information through pharmaceutical channels and appropriate patient education through pub-

lic media. These conditions in no way constitute reportable limitations.

2. Protracted or Chronic Medical Limitations.

The presence of impairments, deformities, or diseases which may be chronic, progressive, or intermittent through periods of months or years constitute potential driver limitation calling for medical evaluation and reporting as agreed upon by involved agencies.

The Role of Treatment, Control or Compensatory Devices

Many medical factors may constitute driver limitation when not under adequate treatment or control. The presence of such diseases or abnormalities need not bar licensing, but may require periodic medical follow-up, reporting or re-examination at the discretion of medical authorities and licensing agencies. It is inherent in this program that individuals with potentially incapacitating medical problems should have their driving right safeguarded when adequate medical therapy or compensatory devices render them safe to operate a motor vehicle.

The Medical Examiner

This program acknowledges that physicians neither issue driving licenses nor revoke them. It is neither the desire nor intention of physicians or medical organizations to exercise such responsibilities which rightly and appropriately are vested in motor vehicle administrators. It is incumbent, however, upon the physician to diagnose and classify medical factors which may impair driving ability.

Medical examiners may be classified either as initial examiners or as appeal or consultant examiners. Initial examiners should be physicians, selected by individual licensees at their own expense, or designated health officers. Out-patient facilities of medical schools and related specialists may be called upon in appropriate circumstances. Appeal or consultant examiners may be asked by licensees or medical authorities to supply additional information or render the basis of initial examination.

In the presence of non-medical or religious tenants bearing on the licensee's concern in medical examination, it is recommended that letters of authorization from such non-medical authorities be transmitted in facilitation of desired examinations. (Permit Control Division of the District of Columbia has such a letter).

Indications for Medical Examinations

Licensees or applicants may be requested to have

medical examination under many conditions, and the following are suggested circumstances under which examination would be indicated:

1. Following accidents in which the driver indicates contributing medical factors such as loss of consciousness, failure to see collision objects, etc.;

2. The presence of gross physical impairments at the time of application for, or renewal of driver's license. Candidates should present themselves in person for renewal as well as original license;

3. Upon written notification by a responsible individual;

4. Reports from physicians as required by law;

5. Reports from physicians on voluntary basis;

6. Notification from other states received through the National Driver License Register;

7. Staff physician reports at the time of discharge from mental institutions;

8. On the basis of previous examinations which have revealed medical limitations;

9. Following multiple accidents or multiple offenses within prescribed calendar periods;

10. Licensees placed in the assigned-risk pool for reasons other than financial liability or minimal licensing age.

11. School health reports reviewed at the time of enrollment in driver training classes.

Age

Chronologic age itself is not construed as a driver limitation. Medical evidence clearly indicates certain progressive impairments which accompany the aging process ultimately leading to pathologic deviations from the normal. There is, however, widespread manifestation of these changes, and therefore, examination in the older age groups is recommended for cause rather than age per se. Licensing is to be based on functional capacities.

Severity

It is recognized that medical limitations may exist in all degrees of severity from total incapacitation to clinically-insignificant and undetectable levels.

A calculable degree of severity or cut-off level is projected as a deciding line for each of the medical factors which may influence driving ability.

Specific Areas of Medical Limitation

1. Intelligence.

The driving task as previously defined necessitates the broad understanding of road markings and directional signs. Basic intelligence must be adequate to perceive and interpret these signs under circum-

stances of normal traffic flow. The non-trainable and non-educable levels of retardation are incompatible with motor vehicle operation. Applicants manifesting questionable levels of interpretative ability at the time of examination should be referred for medical evaluation.

2. Skeletal, Arthritic and Amputation Disabilities.

Disability must be viewed in terms of the specific driving task and may not correlate with employment requirements or the ability of the individual to perform manual labor. Acceptable compensation for these deficiencies may be achieved by medical therapy, prosthetic devices or vehicle alterations. In private passenger vehicle operation, the minor amputation deformities are generally not to be considered significant. Major amputation deformities will not be considered of significance when the driver is properly fitted and skilled in the use of an adequate prosthetic device or vehicle modification. Any major amputation deficiency precludes commercial driving in concurrence with ICC regulations unless a waiver has been granted in accord with procedures specified in the ICC regulations. Progressive or chronic joint diseases constitute driver limitation when creating major impairment of skeletal mobility and should be reevaluated at periodic intervals by the medical review board. (1) Joint diseases which cause pain on movement are considered in the same light as those causing mechanical limitations.

3. Neuromuscular Defects.

These are classified as static impairments (such as resulting from cerebral palsy, cerebral vascular accidents or following polio-myelitis), progressive impairments (such as paralysis agitans or central nervous system syphilis), or potentially progressive impairments (such as multiple sclerosis and its many variations, or myaesthesia gravis). Drivers in the latter two classifications should have periodic medical re-evaluation and assume some personal responsibility in contacting medical advisory boards in the event of changes in their disease, either due to further functional loss or alterations in medical management.

4. Cardio-Vascular and Renal Defects.

Compensated cardio-vascular and renal diseases are not driver limitations in private vehicles, but are limiting factors in commercial driving.

a. Angina Pectoris precludes commercial driving, but is not significant in private passenger driving if the patient is under proper medical care.

b. Stokes-Adams syndrome, when not accompanied by loss of consciousness or when adequately managed by artificial pacemakers, may not constitute

private passenger vehicle limitations, but precludes commercial vehicle operation.

c. Myocardial infarctions. Adequate rehabilitation following myocardial infarctions need not preclude private passenger licensing, but does preclude commercial driving except under unusual conditions certified by competent cardiologists.

d. Generalized atherosclerosis and senile Parkinsonism create progressive reduction in reaction time and motor responses and may constitute driver limitation at any time according to the judgment of the examining physician. Periodic medical review should be instituted on the basis of initial medical examination.

5. Sensory Deficits.

Visual impairments are classified in terms of:

- a. Optimally-corrected central acuity at distance;
- b. Horizontal form fields; and
- c. Night vision.

In private passenger vehicle operation optimally-corrected central acuity of less than approximately 20/40 is unacceptable.

In commercial driving corrected central acuity of 20/20 in each eye is required.

Promptness in acknowledgement of central visual acuity is recognized as essential in vehicle operational demands.

Visual fields are recognized as of particular importance in intersectional collision. Cumbersomeness of current testing procedures generally precludes this type of testing, except on request by the medical examiner. Drivers with corrected central acuity at the lower limits of acceptability should have visual field determinations.

Similarly, night vision is subject to progressive impairment of light sensitivity and glare recovery in proportion to advancing age and in some cases calls for special examination or license restriction.

Cumbersomeness and inadequacies of testing vision under conditions of partial illumination (mesopic vision) render this testing appropriate only on request by the examining physician.

The loss of serviceable vision from one eye imposes some limitation on driving ability. The significance of monocular visual loss requires further medical evaluation.

Auditory

Hearing is acknowledged to constitute a relatively-minor sensory avenue in vehicle operation, but in the presence of gross limitation requires the installation of additional outside mirrors. Hearing assumes increasing importance in association with visual re-

ductions at the lower limits of acceptability or restriction of movement because of joint disease.

6. *Neuropsychiatric.*

Psychiatric disturbances are recognized as significant factors in accident causation, but current problems in screening and in differential diagnoses render the identification of driver limitations in this area extremely difficult.

Where it is possible, psychiatrists are requested to report to the medical board, driver limiting illnesses in patients discharged from state or private institutions.

Convulsive States (Altered Levels of Consciousness)

These conditions should be reportable to medical authorities for periodic surveillance, but under adequate treatment and control do not limit private vehicle operation.

Intractable seizure states preclude licensing for all types of vehicles.

7. *Endocrine Disease.*

Senile onset diabetes controllable by diet alone does not constitute driver limitation and is generally of no concern to motor vehicle administrators.

Diabetes or hypoglycemic states requiring oral or parenteral medication should be reported to medical authorities for periodic review. If adequate treatment is maintained, this does not constitute reason for withdrawal of private vehicle license, but does preclude commercial carrier licenses.

Juvenile diabetes are characterized by unusual severity, difficulties in management and pre-disposition to long-term complication, and therefore, closer periodic surveillance is required.

8. *Alcoholism.*

Alcoholism is recognized as a major contributing factor in traffic accidents and frequently as a symptom of underlying psychiatric illness.

Reasonable evidence of chronic alcoholism constitutes a real driver limitation and grounds for suspension of driving privileges until evidence of adequate correction is submitted for medical review.

Blood alcohol levels of .05 per cent constitute medical impairment of driving ability and blood alcohol levels of .10 per cent indicate intoxication.

The cooperation of the courts is urged in referring suspect problems of alcoholism for medical and psychiatric evaluation.

All factors in the above medical evaluations are considered as supplemental to requirements of current screening procedures.

Minor degrees of impairments in several of the

above may constitute driver limitation just as may major impairment in a single area.

This program expects of the examining physician the exercise of sound responsible judgment based on individual evaluation.

HOW SAFE ARE HEALTH WORKERS? HEALTH HAZARDS TO HEALTH WORKERS

Taken from the Proceedings of the President's Conference on Occupational Safety, June 23-25, 1964, Washington, D. C. Presented by Gordon S. Siegel, MD of Washington, D. C.

Population growth, and an aging population, changes in social values and systems an "affluent society", and a host of other factors are interacting to make health services a growth industry—a most phenomenal growth industry. Make no mistake, health workers are engaged in big business. The category of health service workers now ranks seventh in the list of major occupational groupings.

An analysis of 1960 data reveals that 2.6 million people were engaged directly in health services, representing 4 percent of the total experienced labor force. In the decade 1950-60, the population of the United States increased 19 percent—all employment increased 14 percent—but the number of workers in health services increased an amazing 60 percent. This growth and its resultant health and safety impact is reflected in the choice of this subject and panel for inclusion in the 1964 President's Conference.

Health services is not only a big business, it is an unusual business. Many of the customary incentives to health and safety control in other common enterprises seemingly have been inoperative in the health services. There has been little incentive to promote occupational health and safety as a means of financial loss control and profit stimulation. We find it difficult to measure units of production or to quantitate efficiency as related to delivery of health services. Health service units vary greatly in size, scope, and in function. There is a tremendous array ranging from the solo practitioners of the healing arts to giant hospital corporations, from the one-man research laboratory to medical research institutes employing literally tens of thousands. Disasters highlighting and pointing to occupational health and safety problems have been relatively rare; those which have occurred have frequently been ignored. Management has been deficient.

Similarly, health workers themselves are often characterized by the adage "Familiarity breeds con-

tempt". It is ironic that workers whose milieu and purpose is the promotion of health and alleviation of disease often have displayed a callous, sometimes irrational, attitude toward the inherent health hazards in their work. Simplest attempts at injury recognition and institution of control measures have been ignored or resisted.

Now, however, we are faced with a giant, growing enterprise, one in which the sheer economic burden of modern medical care and research dictates attempts to institute efficient management. The fantastic associated technology in which health workers are enmeshed is beginning to take a visible, increasing work-related injury and disease toll. Thus, there is now belated recognition, and some understandable fear, of modern health and safety problems in the health services industry.

Those of us who are more than passingly interested in this problem and in developing control measures, find few reliable facts and figures to help determine accurately the scope and nature of the problem. Attempts to assess meaningful work-injury and illness facts and figures are frustrating, for strangely, among health workers who pride themselves on the necessity for maintaining accurate and detailed records, little vital occupational health and safety data are recorded. Yet, there is no paucity of incidents to clearly indicate that there are important unsolved health and safety problems. I am sure that my fellow panelists will amply discuss specific problem areas and experiences which will bear out my conclusions.

Specific examples are enlightening and focus attention on the urgency of some current health hazards to health workers. Who are these health workers? Some 1.2 million persons are professional and technical workers, some 0.8 million are service workers, an additional 0.4 million are clerical workers, and 0.2 million other workers are officials, craftsmen, operators, and laborers.

Many of these people are struggling with the health work of mental hygiene and mental illness care. The department of mental hygiene of a large State recently reported on disabling work injuries to its 15,000 employees over a 1-year period. There were 1,649 disabling injuries, including 3 fatalities. There were 44 fractures, 27 burns, and 21 crushing injuries—this in a "service" occupational group! The heaviest U. S. manufacturing industry would never accept 1,649 disabling work injuries a year, resulting in 38,000 man-days lost time, in an employee-force of 15,000 workers.

Health practitioners at all levels are prone to attack by unexpected—and perhaps lethal—hazards.

A recent issue of the British Medical Journal editorialized on "lessons about smallpox". I quote, "In the outbreaks here 67 cases occurred with 26 deaths, giving a fatality of 39 percent—some indication of the lethal nature of smallpox. . . . turning to the cases themselves, we first see the serious consequences of inadequately protected medical and auxiliary staff who may come into contact with smallpox at any time in the course of their ordinary duties . . . the erratic visitations of smallpox seem to lull us into a false sense of security".

Hospitals have striven mightily to safeguard the welfare and safety of their patients. What of their employees? The Bureau of Labor Statistics of the U. S. Department of Labor undertook an extensive and detailed study of the work-injury experience of hospital employees based upon records for the year 1953. This represented a full year's experience for approximately 838,000 hospital workers. Strains and sprains, hernias, and fractures are usually indicative of heavy manual handling activities. Special studies made by the Bureau in 12 other industries showed only one industry, warehousing and storage, with a greater proportion of strains and sprains than hospital workers.

Laboratory workers and researchers may be in the forefront of danger. At a recent national meeting on occupational zoonoses (diseases of animals transmittable to man), it was reported that there have been 16 deaths among laboratory and research workers due to infection with monkey B virus. This disease of non-human primates, which generally produces a mild illness in the natural host, frequently produces a fatal encephalitis in man. Vigorous attempts are being made to develop a vaccine to protect laboratory workers and researchers working with monkey colonies. Recent surveys carried out by the Division of Occupational Health, unfortunately, adequately document the lack of understanding and safety hazards found among laboratory personnel. There has been a concomitant lack of vigorous management effort to promote health and safety. Expert chemists may, and frequently do, have poor understanding of the health and safety factors and problems associated with their work. Rudimentary safety controls, such as the grounding of electrical equipment, the availability and enforcement of the proper use of eye protective equipment, instruction in toxicity and appropriate emergency first aid, are often inadequate or completely lacking. The current technologic revolution has intensified and compounded such problems.

To reiterate: Health work is big business. Large numbers of health workers are engaged in a growth industry. Both "management" and "labor" in the health services have been guilty of neglect of the problem of occupational health and safety. The growth of health services, and the rapid increase in the number of health workers, coupled with the economic necessity for efficiency of operation in health services are bringing the neglected problems of occupational health and safety to attention. Technological advance, in addition to its benefits, is all too often providing daily deleterious health and safety environments for health workers. The health hazards to health workers, although significant, have been dimly perceived and inadequately studied; indicated programs of occupational health and safety control must be instituted. It is my hope that this workshop and this Conference can focus national attention on the problem.

ACCIDENT HAZARDS OF HEALTH WORKERS

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A few years ago in an eastern hospital, a physician caused hot metal to spew out into nearby nursing cribs when he attempted to tighten a leaking safety release on an oxygen cylinder with a greasy wrench. Contacting oxygen with grease and attempting to adjust a safety release, or for that matter, any fitting under high pressure might indicate that training in the health industries is almost nonexistent. Training is the key to success but it continues to offer a formidable stumbling block for several reasons: Because supervisory personnel are more highly educated than in most other industries, they feel that any time taken to receive environmental control instructions would be wasteful; most health agencies do not employ safety personnel but of those that do, divided authority among such facets as infection control, waste disposal, radiation monitoring, sanitation, fire prevention, disaster planning, and accident prevention dissipate the quality of instruction; good training is partially based on a knowledgeable instructor, but knowledge is difficult to come by in the health industry because hazardous incident narrations are never readily exchanged between agencies because of possible legal implications, notoriety, and because patients and citizens would soon lose faith in such establishments. Fortunately health workers do read and, through the written medium, accelerating progress is being made. Many useless statistics are

gradually being replaced by descriptions of specific incidents narrated in pharmaceutical, biological, and chemical house organs, State and Federal health, industrial hygiene, and hospital newsletters, and in separate publications of the AMA, AHA, and the MCA.

Some training should be aimed at imparting specific knowledge and some at creating a hazards awareness. For example, most health workers would be completely surprised to learn that the autoclaving of cellulose nitrate centrifuge tubes may cause an explosion; that stoppered vials may implode if subjected to fast exhaust; that ampoules of biological materials may explode upon removal from a liquid nitrogen refrigerator; that a person could be asphyxiated if he worked a few seconds too long in a walk-in box where dry ice is stored; and that the storage of flammable solvents in a domestic refrigerator, the distillation of ether, and the disposal of picric acid could result in explosions.

In addition to inadequate training, other management deficiencies exist to further complicate the problem of minimizing disability. For the most part, health employees work as individuals at nonroutine assignments and without physical supervision. For example, a technician narrowly missed complete blindness moments after he had screwed the lid down on a bottle full of leftover chemicals which he had gathered together in an attempt to clean up the laboratory.

Health workers do not work at a constant site where variables are at a minimum, but in places such as homes, in swamps, and at meat-packing houses. A meat inspector told me about a warning sign he had observed in a large storage refrigerator. It read, "Use This Axe in Case of Emergency—It Won't Do You Any Good But It Will Keep You Warm". How many cold boxes like this are equipped with an alarm bell and an internal unbolting system?

Health workers handle people who are at times noncooperative and unpredictable. Many nursing personnel suffer strains and sprains from lifting or adjusting patients who may suddenly shift their weight in an unexpected fashion. For example, a dentist was struck in the mouth by a psychiatric patient because the attendant failed to warn him about the patient's possible behavior.

Health personnel receive supervision from technical people who are not themselves closely allied enough to the establishment to take interest in the total management, such as a visiting physician to one hospital patient. For example, a physician discards a needle into the waste basket, smokes while apply-

ing a flammable solvent to his patient, or does similar things which are strictly against the hospital rules but which cannot be readily controlled by the personnel.

Health activities are not subjected enough to inspection by outsiders; partially because health administrators are doing "the best they can" with limited public and private funds. Also, because inspections in depth would certainly reveal deficiencies on the part of the professional personnel but enough public sympathy could be generated to make such inspections meaningless.

The communication channel between scientific and administrative personnel is not always clear. For example, a baby was burned to death at a non-PHS hospital because the heating pad failed. It was old, full of pin holes and not rated for wet areas. The purchasing people were not told that heating pads would be used on patients, to say nothing of helpless infants; on the other hand, the nursing staff had been rebuked many times for not making equipment last a little longer. A death resulted from a typical impasse where technical and nontechnical personnel do not always respect each other's particular specialty. In other industries where hazardous operations exist, there would never be a question of extra money to purchase the highest quality equipment and a backup thermostat.

Overlaps in various environmental control disciplines tend to create slow progress. Sealing around pipes may be desired to prevent noise transmission, for vector control, for fire prevention, nuisance, toxic, or explosive atmosphere transmission, dry sweepings, or contaminated water from floor flushing. Where control personnel are trained to view environmental deficiencies as a total package, more progress can be

made. Another example serves to dramatize this dissipation of effort which, by the way, is not at all limited to health industries but is a weakness of all safety programs. Sanitation people want plastic refuse cans because they're easy to clean; administrators want them because they don't make noise; fire people don't want them because they will transfer fire to adjacent containers; accident-prevention personnel want smaller containers with sturdy top rims to prevent causes of hernias and lacerations and to minimize possible foot injury.

More complex instrumentation creates new hazards which are not well known. Examples include the fire and shock hazards of electrophoresis equipment, ozone created by xenon tube photometry equipment, toxic hazards of gas and vapor chromatography, microwave radiation and sonic vibration equipment, and liquid atmosphere applications.

Scientific personnel are quite often given credit for having more knowledge and ability to apply this knowledge than they actually possess. Although professional personnel are generally aware of toxic chemicals such as mercury or nitric acid, they usually do not become alarmed when a thermometer breaks in a hot oven or a technician drops a large bottle of nitric acid on the floor, although either exposure could be lethal.

Now, how to speed up the breakthrough in health industries. First of all, the professional personnel must be convinced that a problem exists. Then the administrator must be educated to coordinate the many disciplines required to produce an effective control of the environment, looking upon accidents as a single symptom of deficient management. These two steps should produce enough light to uncover a path to progress.

EDITORIAL DESK

THE MANAGER'S ROLE IN QUALITY STAFFING

John W. Macy, Jr., Chairman U. S. Civil Service Commission

In the thousands of inspections of agency personnel operations which the Commission has made in the past 15 years one finding stands out clearly: the caliber of the agency's staff, whether good or bad, can be traced directly to the impact of *line management decisions* of prior years.

"The quest for quality," when it has been successfully achieved, reflects not so much the excellence of the personnel office as the insistence of top managers on selecting and training a competent staff. True enough, the personnel organization of the agency—backed up by recruitment programs,

tests, and standards of the Civil Service Commission—can be of major assistance, but the crucial decisions are those made by the top man and his managers all down the line.

Today's missions and vast responsibilities of Federal agencies demand a high degree of staff effectiveness. Building the Great Society will require an able, dedicated career force, in addition to Presidentially appointed leaders of vision and talent.

For its part the Civil Service Commission is undertaking a fundamental review of staffing policies and operations which affect more than two million positions in the competitive civil service. We want to insure that our regulations, instructions, and standards that govern the filling of these positions meet the realities of today's employment conditions. It is essential that all departments and agencies having competitive positions undertake a similar searching review of staffing policies and procedures, and I am suggesting such action in personal letters to agency heads.

Need for Coordination

One problem area is already apparent to us—the need for better coordination between programs for recruiting, examining, and selecting new employees and programs for reassigning and promoting employees already on the rolls. In our regular inspections we will emphasize the need for coordination of the entire staffing process rather than separate approaches to recruiting, examining, placement, promotion, etc. In this way we hope to encourage wider use of the principle that jobs should be filled by the best placements possible.

Because of the historical emphasis in the Federal merit system on open competitive examinations, the program for boards of U. S. civil service examiners located in the agencies grew up separately from programs for placing and promoting employees within the agencies. By emphasizing quality staffing we hope to bring these two functions of external and internal recruitment into a sounder and closer relationship.

The basic concept of boards of examiners, representing a partnership between the Commission and experts in the agencies, dates back to the Civil Service Act of 1883 and is fully viable today. In fact, this partnership is now stronger than it was a generation ago, when the Commission attempted to employ on its own rolls experts in agriculture, economics, the natural sciences, etc., to plan and conduct examinations in their specialized fields. We

found that truly expert professionals did not regard this type of examining work as a challenging career. Today, through a greatly expanded program of boards of examiners, we are able to enlist the part-time services of acknowledged experts from the agencies that will employ the candidates who pass the examinations. In this way we can assure ourselves that examining standards and procedures and the actual rating process will be shaped by persons who have full professional competence in the occupational areas concerned.

Our inspections emphasize the need to coordinate board activities closely with the agency's internal staffing programs. In addition, we assist agency management in improving all aspects of staffing practices. We urge managers not to await the formal inspection process but to make their own regular reviews of the whole staffing activity of their agencies.

Merit Promotion

The Federal Merit Promotion Program, covering more than 2 million jobs in the competitive service, has now been in effect for 6 years. Its primary goal is to assist Federal managers in designing simple, effective methods for assuring that promotions will be made from among the best qualified employees available. The Commission recognized that no one system would be equally effective for all agencies, in view of vast differences in size, structure, geographical dispersion, mission, and occupational characteristics. Therefore, agencies were given discretion to shape their own promotion programs within broad guidelines issued by the Commission, and after consultation with employee organizations. These guidelines include the following principles:

1. Broad areas of consideration must be used to provide a supply of well qualified candidates for promotion.
2. Qualification standards and evaluation methods must be reasonable and valid, and must be applied with fairness and equity to all candidates.
3. Selection must be made from among the best of the qualified candidates without discrimination among them for any nonmerit reason such as sex, race, religion, or politics.
4. Concurrent consideration should be given to qualified individuals outside the agency who are known to be available.
5. Provision must be made for administrative action on complaints arising out of promotion procedures and actions.
6. The views of employees and employee organizations must be obtained in developing promotion

plans and when making substantive revisions in them.

7. Adequate procedures must be developed for periodic review of promotion guidelines and plans.

Our reviews of the new program show that it has demonstrated its value to both employees and agency management. The program's insistence on competition for promotion within wide areas of consideration and selection on the basis of merit has created promotion opportunities where there were none before and has led to the selection of competent people who would otherwise have been overlooked.

Several perfecting amendments have been made to Commission guidelines and instructions as the result of our reviews but no major changes were found necessary. Nevertheless we find that some misunderstandings about the promotion program still exist among managers and employees.

The following are typical of misunderstandings on the part of employees:

"Why call this a promotion program when agencies can still hire people from the outside?"

In requiring adoption of the new promotion program, the Commission did not infringe on the right of the manager to choose the *method* of filling each vacancy. Thus he can decide to fill a vacant job by reassignment, transfer from another agency, reinstatement of a former Federal employee, probational appointment from a civil service examination, or promotion from within. Our civil service system has always provided this type of flexibility—an essential feature of merit staffing.

Qualified persons from outside an organization should be given concurrent consideration. Only in this way can we have a measure against which to judge candidates already in the organization. A Federal agency or office is, first of all, a public organization with a responsibility to staff its positions in the public interest. Only by preserving its ability to consider and select from among the best of all the qualified persons available can management carry out this trust effectively. For this reason, a Federal office cannot be the private *"career preserve"* of its own employees, nor can management permit the stagnating effect of too much inbreeding. *This is not merit promotion.*

Other respected career systems which are run on merit principles have, in recent years, recognized the need for "lateral entry" at middle and upper levels; for example, the American Foreign Service and the British Administrative Class. In the American civil service, we have always kept the way open for com-

petent persons from business, labor, universities, and other segments of American life. We need to insure that these doors remain open, not slightly ajar.

Because of their job-related experience, well qualified employees necessarily enjoy an advantage over outsiders in getting many higher level positions and a virtual monopoly on them in most areas where qualifications unique to Government are required. This fact notwithstanding, it is a proper public responsibility to require that agency management retain the flexibility to consider other citizens where they too—through open competition—can meet agency needs. What is in the public interest must prevail. This is fundamental.

"The areas of competition for promotion are too broad in my agency's plan."

It is natural for employees in a division or office to feel that they should have the inside track when a vacancy occurs in that office. Therefore they may be concerned when an employee is brought in from another division or office of the agency. What they overlook is that a broad area of competition, while seeming to go against them in this case, may well operate in their favor the next time by getting them a promotion in another office of the agency.

The practice of giving real consideration to so-called outsiders means greatly enlarged promotion opportunities for highly qualified people. Semiautomatic promotion of the less well qualified would injure the quality of the public service and the best interests of all its employees. From the viewpoint of the agency and the general public, it is essential to a sound career development plan for employees to compete for promotion on a broad interoffice, regional, or even nationwide scale, depending on the type of job. Otherwise promotional opportunities are too much a matter of change; one regional office may have a high turnover so that every remaining employee can progress as fast as his qualifications allow, while in another regional office of the same agency, better qualified employees may lose opportunity to advance.

The Commission has not attempted to prescribe or define areas of competition for promotion purposes, since this will necessarily vary with the kinds of jobs and the needs of the agency. But the basic effort of the whole promotion program is to extend these areas beyond the narrower confines used in the past.

"More weight should be given to seniority in ranking employees for promotion."

Seniority can properly be controlling in such management decisions as assigning preferred work shifts,

lunch hours, parking spaces, vacation periods, etc., but the selection of candidates for promotion to higher grades is too crucial to the future health of an enterprise to be decided on such an automatic basis. Seniority as the primary determinant in promotion disregards the public interest in the favor of the special interests of one employee who has the most time in a given office. The employee with long experience on the job has a natural advantage if he has continued to grow as a result of this experience but we all know of employees whose long tenure on the job has not increased their effectiveness proportionately. The criterion of seniority for advancement completely ignores factors of potential, initiative, drive, and leadership ability which we must encourage and reward if we are to raise productivity in line with the commitment of the President and our obligation to the American people.

The very nature of our personnel system gives ample evidence of the Commission's interest and good faith with respect to the needs of long-service employees. That system, however, should never be so narrow in its promotion principles that it puts a premium on how long an employee has been around and outweighs an honest appraisal of how far he is capable of going. In other words, when management promotes an employee, it should give primary consideration in its selection to its assessment of how well the individual will perform the more difficult job, not solely to how long he has done a less responsible one. This principle is also fundamental.

"My agency should post notices informing all employees of vacancies."

Posting or circulating notices is certainly one effective way of calling promotion opportunities to the attention of interested employees. Many Federal agencies have adopted such plans after consulting with their employees. The advantages of this method are obvious and easily understood. It does have the weakness that an employee who is absent for a while may miss an opportunity to apply. Also, the posting requirement may delay filling the job.

Another method of insuring consideration for all employees is a review of employee records by the personnel office. This requires, of course, complete and current statements of qualifications prepared by employees, and some systematic way of coding the records so that all eligible employees will come up for consideration when a vacancy occurs. A disadvantage of this method is that the employee doesn't know every consideration he receives. However, there are important advantages. Here, again, the

employee doesn't have to be constantly alert to apply for every possible opportunity for fear of missing one.

The Commission has not specified which of these basic methods agencies must choose, since we believe this is a matter to be decided by each agency in the light of its own management needs, after appropriate consultation with its employees.

Management also has its share of misunderstandings about the promotion program. Following are three typical comments:

"The program requires too much paperwork."

The Commission's guidelines are broad and do not specify details or procedures. In an earnest effort to do a good job some agencies have developed needlessly elaborate systems. In our inspections of agency promotion programs we find more occasions to criticize overly complicated plans than overly simple ones. We hope through our inspections to reduce promotion paperwork wherever possible. We urge managers to review their present procedures critically.

At the same time, we must all recognize that a talent search requires some effort, whether it is a nationwide contest for high school science students or a military or civilian promotion program.

"When most or all candidates for promotion are qualified to fill the vacancy, I can't possibly rank them adequately to select the best qualified."

Ranking large numbers of employees who already meet minimum standards for a vacancy can be a real problem. Appropriate written tests, records of experience and training, interviews, and supervisory appraisals all have value when properly used. This can become a technical matter, and the manager would do well to request advice from his personnel staff. The Commission is developing materials to help agencies in the evaluation and ranking process. But the manager must personally involve himself in the process, rather than relying on external formulas, by expressing his definition of quality candidates and determining the methods that will select them.

"The same person would have been promoted anyway."

This comment sometimes comes from agencies which had effective promotion programs before 1959; in other words, there is nothing new in the program for agencies which have always done a good promotion job. In other cases, an outstanding candidate may loom above all other contenders regardless of formal procedures. But even in such cases the capable manager will want to assure himself, by systematic screening, that the apparently logical choice is actually the best qualified. In this

way the promotion plan provides a way of verifying or doublechecking what seems to be an obvious selection.

These misunderstandings, plus our findings in many inspections, highlight the need for *better communication* between top management and those who operate the promotion program or come under its provisions. In our inspections we find that substantial numbers of employees have some knowledge of the promotion plan but a significant number do not. The Federal Merit Promotion Program is respected most by those who know most about it. Practically all the complaints were withdrawn by the employees when the promotion procedure was fully explained. Of course, in considering criticisms of any promotion plan, we must allow for the feelings of people who are not selected for advancement. Understandably there will always be some disappointments; therefore, complaints and appeals must be sympathetically considered.

A Commission Action Program

The action program for quality staffing which the Commission is undertaking includes the following elements:

1. The Commission will focus its resources on a positive program to achieve quality staffing in the Federal service, including a critical review of recruitment, examining, staffing, and career development policies and practices.
2. Future reviews of agency personnel management will emphasize quality staffing and will inquire how managers are meeting their responsibilities in this important area.
3. We expect to publish periodic reports analyzing Federal turnover and accessions, occupation by occupation, and projecting requirements for new workers several years in advance. This should help agency managers as well as the Commission staff and placement officials in the educational world.
4. We will place increased emphasis on quality staffing when conducting training conferences for agency personnel. For example, a new course has recently been given in Washington to junior placement officers and plans are going forward to conduct similar training in the field. An advanced course for heads of agency placement programs is now being planned.
5. We will give increased assistance to agency placement officials through developing better evaluation and ranking techniques. As we prepare

new or revised classification and qualification standards, we will identify the important factors to be considered in evaluating candidates for selection and promotion.

6. The Commission will take action to maintain the high quality of Federal personnel officials, since they obviously have an essential role to play in upgrading the quality of the entire staff. High standards for entrance into Government personnel work continue to be needed as well as effective career development and training of those already on the rolls.

What the Manager Can Do

To summarize, the following action steps are suggested for responsible Federal managers who wish to advance the cause of quality staffing in their organizations:

1. Hold fast to the concept of filling each vacancy with the best possible candidate, whether from within the agency or from elsewhere.
2. Review personnel practices to insure that the concept of quality staffing permeates all aspects of the program, with due emphasis given to advance planning, identification of needs, proper relationship of external and internal recruitment, and development of promotion ladders and cross-training opportunities.
3. Using the Commission's periodic manpower projections as a start, develop agency projections, occupation by occupation, as precisely as possible.
4. Keep employees and employee organizations fully informed of staffing practices.
5. Eliminate unnecessary delays and paperwork in placement programs.
6. Above all, insure that responsible program managers fully accept their responsibility for personnel management. Let them know that they will be evaluated on their ability to do so. Where appropriate, encourage them to serve as members of boards of examiners, to comment on proposed CSC drafts of classification and qualification standards, to go on recruiting trips, to comment on proposed changes in promotion plans, to serve on promotion panels, and to plan and participate in training and career development programs.

Conclusion

Through the initiative and vigorous leadership of the President, we now have a white-collar salary scale

that is reasonably competitive with that of private employment. We need to insure that the quality of Federal staffing and performance on the job are commensurate with these improvements in the Federal salary structure. As President Johnson recently stated on signing the Government Employees Salary

Reform Act of 1964, "America's challenges cannot be met in this modern world by mediocrity at any level, public or private. All through our society we must search for brilliance, welcome genius, strive for excellence . . ." (From: OIR Newsletter XVI(4): 5-8, April 1965.)

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